

The following Listing of the Claims will replace all prior versions and all prior listings of the claims in the present application:

Listing of The Claims:

1. (Currently Amended) A profile array substrate comprising:

a first location having for placement of a test tissue,

a second location having for placement of a control oncology tissue microarray comprising a plurality of tissue samples, each tissue sample stably associated with a distinct, known sublocation on a substrate, at least one tissue sample comprising a normal tissue sample, the control oncology tissue microarray comprising tissue samples representing the progression of cancer from an early stage to an advanced stage, the substrate further comprising an identifier providing access to a database comprising information relating to each patient from whom each tissue sample of the control oncology tissue microarray was obtained,

wherein the profile array substrate allows testing of the test tissue to be done simultaneously with the testing of the tissue samples on the control oncology tissue microarray allowing for a side-by-side comparison of the test tissue with the tissue samples in the control oncology tissue microarray.

2. (Previously Presented): The profile array substrate according to claim 1, wherein said identifier, when entered into an interface of a user computer connectable to a network, causes a screen to be displayed displaying one or more links to portions of the database comprising information relating to each patient.

3. (Canceled)

4. (Canceled)

5. (Canceled)

6. (Canceled)

7. (Canceled)

8. (Canceled)

9. (Currently Amended) The profile array substrate of claim 1 or 2, wherein at least one tissue sample is greater than about 0.6 mm in diameter.

10. (Currently Amended) The profile array substrate according to claim 1, wherein at least one tissue sample comprises paraffin- or plastic-embedded cells or tissue.

11. (Canceled)

12. (Previously Presented) The profile array substrate according to claim 1, wherein said cancer type is selected from the group consisting of breast cancer, skin cancer, head and neck cancer, colon cancer, cervical cancer, ovarian cancer, prostate cancer, and lung cancer.

13. (Currently Amended) The profile array substrate according to claim 1, wherein each tissue sample comprises substantially homogeneous cells.

14. (Currently Amended) The profile array substrate according to claim 13, wherein each tissue sample which comprises substantially homogeneous cells comprises cells which express a cancer-specific marker.

15. (Currently Amended) The profile array substrate according to claims 1, wherein each tissue sample is from a patient treated with a drug.

16. (Canceled)

17. (Withdrawn) A kit comprising:

(a) an oncology microarray, said oncology microarray comprising a plurality of samples, each sample stably associated with a distinct, known sublocation on a substrate, at least one sample comprising abnormally proliferating cells; and

(b) a normal tissue microarray, comprising at least two samples each of at least about two different tissue types.

18. (Withdrawn) A kit according to claim 17, wherein said normal tissue microarray comprises at least about five different tissue types.

19. (Withdrawn) The kit according to claim 18, wherein said five different tissue types are selected from the group consisting of cerebrum, cerebellum, medulla, cardiac tissue, lung tissue, thyroid gland, adrenal gland, submandibular gland, pancreas, liver, tonsil, spleen, lymph node, endometrium, ovary stroma, myometrium, fallopian tube, endocervix, ectocervix, placenta, kidney, prostate, seminal vesicle, stomach tissue, duodenum, ileum, appendix, colon, gall bladder, skeletal muscle, and smooth muscle.

20. (Withdrawn) The kit according to claim 18, wherein said at least about five different tissue types are from a single patient.

21. (Withdrawn) The kit according to claim 18, wherein said normal tissue microarray comprises at least about ten different tissue types.

22. (Withdrawn) The kit according to claim 21, wherein said normal tissue microarray comprises at least about twenty different tissue types.

23. (Withdrawn) The kit according to claim 22 wherein said oncology array or said normal array further comprises an identifier providing access to a database comprising information relating to at least one patient from whom at least one sample was obtained.

24. (Withdrawn) The kit according to claim 23, wherein said identifier, when entered into the interface of a user computer connectable to the network, causes a screen to be displayed displaying one or more links to portions of the database comprising information relating to said at least one patient.

25. (Withdrawn) The kit according to claim 24, wherein said oncology microarray further comprises at least one sample comprising frozen cells or tissue.

26. (Withdrawn) The kit according to claim 24, wherein said oncology microarray further comprises at least one other sample comprising cells from a bodily fluid from the same patient providing the sample of abnormally proliferating cells.

27. (Withdrawn) The kit according to claim 24, wherein said oncology microarray comprises cells from abnormally proliferating head and neck tissue.
28. (Withdrawn) The kit according to claim 27, wherein said oncology microarray comprises one or more of normal oral mucosa, cancerous oral mucosa with mild to moderate dysplasia, oral mucosa with severe dysplasia or carcinoma in situ, nodal negative head and neck cancer, nodal positive head and neck cancer, and lymph node metastases.
29. (Withdrawn) The kit according to claim 27, wherein said oncology microarray comprises one or more samples comprising cancers of the lip, tongue, tonsil, oral mucosa, and pharynx.
30. (Withdrawn) The kit according to claim 24, wherein said oncology microarray comprises one or more samples from tissues comprising benign prostatic hyperplasia, prostatic intraepithelial neoplasia, prostate cancer (Gleason score 1-2), prostate cancer (Gleason score 4), prostate cancer (Gleason score 5), and prostate cancer metastases.
31. (Withdrawn) The kit according to claim 24, wherein said oncology microarray comprises one or more samples from normal colon tissue, cancerous colon mucosa, adenocarcinoma with mild dysplasia, adenoma with severe dysplasia, nodal negative colorectal cancer, nodal positive colorectal cancer, and colon cancer metastases.
32. (Withdrawn) The kit according to claim 24, comprising one or more samples from normal lung parenchyma, normal lung bronchi, adenocarcinoma, squamous cell carcinoma, undifferentiated large cell carcinoma, and metastases from cancerous lung tissue.
33. (Withdrawn) The kit according to claim 24, wherein said oncology microarray comprises one or more normal breast tissue, ductal carcinoma tissue, invasive ductal tissue grade 1, invasive ductal tissue grade 2, invasive ductal breast cancer grade 3, and metastases thereof.

33. (Withdrawn) The kit according to claim 24, wherein said oncology microarray comprises tissue samples from at least five different tumor types.

34. (Withdrawn) The kit according to claim 33, where said tumor types are selected from the group consisting of colorectal tumors, prostate tumor, lung tumors, breast tumors, kidney tumors, urinary bladder tumors, ovarian tumors, brain tumors, malignant melanoma, and head and neck tumors.

35. (Withdrawn) A method for detecting the expression of a cancer-specific marker in a test sample, comprising:

- (a) providing a test sample comprising cells or tissue;
- (b) providing a microarray according to any of claims 1, 3, or 4, wherein said at least one sample comprising abnormally proliferating cells express said cancer-specific marker;
- (c) reacting the test sample and the microarray with a molecular probe which specifically reacts with said cancer-specific marker;
- (d) detecting the presence, absence or amount of said reactivity in said test sample and comparing said reactivity to the reactivity of said at least one sample.

36. (Withdrawn) The method according to claim 35, wherein said comparing in step (d) provides a diagnosis or prognosis of cancer in cells or tissue in said test sample.

37. (Withdrawn) The method according to claim 36, wherein information relating to the reactivity of said molecular probe with said test sample and/or said microarray is entered into a specimen-linked database.

38. (Withdrawn) The method according to claim 35, wherein said test sample is from a patient treated with a drug.